OIPE

#5

RAW SEQUENCE LISTING   DATE: 06/05/2002
PATENT APPLICATION: US/10/087,286   TIME: 10:51:44

Input Set : **A:\PTO.PG.txt**
Output Set: **N:\CRF3\06052002\J087286.raw**   P.6

ENTERED

```
  3 <110> APPLICANT: ARIAD Gene Therapeutics, Inc.
  5 <120> TITLE OF INVENTION: Expression of Proteins for Treating Asthma via Ligand
Mediated Activation
  6         of Their Encoding Genes
  8 <130> FILE REFERENCE: 356A PCT/USC1
 10 <140> CURRENT APPLICATION NUMBER: 10/087,286
 11 <141> CURRENT FILING DATE: 2002-03-02
 13 <160> NUMBER OF SEQ ID NOS: 79
 15 <170> SOFTWARE: PatentIn version 3.0
 17 <210> SEQ ID NO: 1
 18 <211> LENGTH: 11
 19 <212> TYPE: DNA
 20 <213> ORGANISM: Artificial
 22 <220> FEATURE:
 23 <223> OTHER INFORMATION: Metallothionene AP1 Site
 25 <220> FEATURE:
 26 <221> NAME/KEY: promoter
 27 <222> LOCATION: (1)..(11)
 28 <223> OTHER INFORMATION: Metallothionen AP1 site
 31 <400> SEQUENCE: 1
 32 tgactcagcg c                                              11
 35 <210> SEQ ID NO: 2
 36 <211> LENGTH: 13
 37 <212> TYPE: PRT
 38 <213> ORGANISM: Artificial
 40 <220> FEATURE:
 41 <223> OTHER INFORMATION: pBS-GAL4 5' fragment
 43 <220> FEATURE:
 44 <221> NAME/KEY: PEPTIDE
 45 <222> LOCATION: (1)..(13)
 46 <223> OTHER INFORMATION: pBS-GAL4 5' fragment
 49 <400> SEQUENCE: 2
 51 Met Lys Leu Leu Ser Ser Ile Arg Gln Leu Thr Val Ser
 52 1               5                   10
 54 <210> SEQ ID NO: 3
 55 <211> LENGTH: 94
 56 <212> TYPE: DNA
 57 <213> ORGANISM: Artificial
 59 <220> FEATURE:
 60 <223> OTHER INFORMATION: pBS-GAL4 5' fragment
 62 <220> FEATURE:
 63 <221> NAME/KEY: misc_feature
 64 <222> LOCATION: (1)..(94)
 65 <223> OTHER INFORMATION: pBS-GAL-4 5' fragment
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Input Set : **A:\PTO.PG.txt**
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```
 68 <400> SEQUENCE: 3
 69 cgacaccgcg gccaccatga agctactgtc ttctatcgga cagttgactg tatcggtcga     60
 71 ctgtcgctgt caactgacat agccagctga cagc                                  94
 74 <210> SEQ ID NO: 4
 75 <211> LENGTH: 12
 76 <212> TYPE: PRT
```
C--> 77 **<213> ORGANISM: Artificial**
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 79 <220> FEATURE:
 80 <223> OTHER INFORMATION: pBS-HNF 5' fragment
 82 <220> FEATURE:
 83 <221> NAME/KEY: PEPTIDE
 84 <222> LOCATION: (1)..(12)
 85 <223> OTHER INFORMATION: pBS-HNF 5' fragment
 88 <400> SEQUENCE: 4
 90 Met Val Ser Lys Leu Ser Ala Phe Arg His Lys Leu
 91 1               5                   10
 93 <210> SEQ ID NO: 5
 94 <211> LENGTH: 90
 95 <212> TYPE: DNA
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C--> 96 **<213> ORGANISM: Artificial**
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 98 <220> FEATURE:
 99 <223> OTHER INFORMATION: pBS-HNF 5' fragment
101 <220> FEATURE:
102 <221> NAME/KEY: misc_feature
103 <222> LOCATION: (1)..(90)
104 <223> OTHER INFORMATION: pBS-HNF 5' fragment
107 <400> SEQUENCE: 5
108 cgacaccgcg gccaccatgg tttctaagct gagcccttcc ggcacaagtt ggtcgactgt     60
110 cgggaaggcc gtgttcaacc agctgacagc                                      90
113 <210> SEQ ID NO: 6
114 <211> LENGTH: 11
115 <212> TYPE: DNA
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C--> 116 **<213> ORGANISM: Artificial**
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118 <220> FEATURE:
119 <223> OTHER INFORMATION: generic start site
121 <220> FEATURE:
122 <221> NAME/KEY: misc_feature
123 <222> LOCATION: (1)..(11)
124 <223> OTHER INFORMATION: generic start site
127 <400> SEQUENCE: 6
128 ggccaccatg c                                                           11
131 <210> SEQ ID NO: 7
132 <211> LENGTH: 17
133 <212> TYPE: DNA
```
C--> 134 **<213> ORGANISM: Artificial**
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136 <220> FEATURE:
137 <223> OTHER INFORMATION: generic start site, complement
139 <220> FEATURE:
140 <221> NAME/KEY: misc_feature
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RAW SEQUENCE LISTING   DATE: 06/05/2002
PATENT APPLICATION: US/10/087,286   TIME: 10:51:44

Input Set : A:\PTO.PG.txt
Output Set: N:\CRF3\06052002\J087286.raw

```
    141 <222> LOCATION: (1)..(17)
    142 <223> OTHER INFORMATION: generic start site, complement
    145 <400> SEQUENCE: 7
    146 cgccggtggt acgagct                                        17
    149 <210> SEQ ID NO: 8
    150 <211> LENGTH: 11
    151 <212> TYPE: PRT
C--> 152 <213> ORGANISM: Artificial
    154 <220> FEATURE:
    155 <223> OTHER INFORMATION: generic start site + NLS
    157 <220> FEATURE:
    158 <221> NAME/KEY: PEPTIDE
    159 <222> LOCATION: (1)..(11)
    160 <223> OTHER INFORMATION: generic start site + NLS
    163 <400> SEQUENCE: 8
    165 Leu Asp Pro Lys Lys Lys Arg Lys Val Leu Glu
    166 1               5                   10
    168 <210> SEQ ID NO: 9
    169 <211> LENGTH: 27
    170 <212> TYPE: DNA
C--> 171 <213> ORGANISM: Artificial
    173 <220> FEATURE:
    174 <223> OTHER INFORMATION: generic start site + NLS
    176 <220> FEATURE:
    177 <221> NAME/KEY: misc_feature
    178 <222> LOCATION: (1)..(27)
    179 <223> OTHER INFORMATION: generic start site + NLS
    182 <400> SEQUENCE: 9
    183 tcgaccctaa gaagaagaga aaggtac                             27
    186 <210> SEQ ID NO: 10
    187 <211> LENGTH: 27
    188 <212> TYPE: DNA
C--> 189 <213> ORGANISM: Artificial
    191 <220> FEATURE:
    192 <223> OTHER INFORMATION: generic start site + NLS, complement
    194 <220> FEATURE:
    195 <221> NAME/KEY: misc_feature
    196 <222> LOCATION: (1)..(27)
    197 <223> OTHER INFORMATION: generic start site + NLS, complement
    200 <400> SEQUENCE: 10
    201 gggattcttc ttctctttcc atgagct                             27
    204 <210> SEQ ID NO: 11
    205 <211> LENGTH: 6
    206 <212> TYPE: PRT
C--> 207 <213> ORGANISM: Artificial
    209 <220> FEATURE:
    210 <223> OTHER INFORMATION: NF2/3V1E 5' end
    212 <220> FEATURE:
    213 <221> NAME/KEY: PEPTIDE
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RAW SEQUENCE LISTING   DATE: 06/05/2002
PATENT APPLICATION: US/10/087,286   TIME: 10:51:44

Input Set : **A:\PTO.PG.txt**
Output Set: **N:\CRF3\06052002\J087286.raw**

```
214 <222> LOCATION: (1)..(6)
215 <223> OTHER INFORMATION: NF2/3V1E 5' end
218 <400> SEQUENCE: 11
220 Ala Pro Pro Thr Asp Val
221 1               5
223 <210> SEQ ID NO: 12
224 <211> LENGTH: 29
225 <212> TYPE: DNA
```
C--> **226 <213> ORGANISM: Artificial**
```
228 <220> FEATURE:
229 <223> OTHER INFORMATION: NF2/3V1E 5' end
231 <220> FEATURE:
232 <221> NAME/KEY: misc_feature
233 <222> LOCATION: (1)..(29)
234 <223> OTHER INFORMATION: NF2/3V1E 5' end
237 <400> SEQUENCE: 12
238 cgacagtcga cgcccccccg accgatgtc                          29
241 <210> SEQ ID NO: 13
242 <211> LENGTH: 5
243 <212> TYPE: PRT
```
C--> **244 <213> ORGANISM: Artificial**
```
246 <220> FEATURE:
247 <223> OTHER INFORMATION: NF2/3V1E 3' end
249 <220> FEATURE:
250 <221> NAME/KEY: PEPTIDE
251 <222> LOCATION: (1)..(5)
252 <223> OTHER INFORMATION: NF2/3V1E 3' end
255 <400> SEQUENCE: 13
257 Asp Glu Tyr Gly Gly
258 1               5
260 <210> SEQ ID NO: 14
261 <211> LENGTH: 26
262 <212> TYPE: DNA
```
C--> **263 <213> ORGANISM: Artificial**
```
265 <220> FEATURE:
266 <223> OTHER INFORMATION: NF2/3V1E 3' end
268 <220> FEATURE:
269 <221> NAME/KEY: misc_feature
270 <222> LOCATION: (1)..(26)
271 <223> OTHER INFORMATION: NF2/3V1E 3' end
274 <400> SEQUENCE: 14
275 gacgagtacg gtgggctcga gtgtcg                             26
278 <210> SEQ ID NO: 15
279 <211> LENGTH: 26
280 <212> TYPE: DNA
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C--> **281 <213> ORGANISM: Artificial**
```
283 <220> FEATURE:
284 <223> OTHER INFORMATION: NF2/3V1e 3' end, complement
286 <220> FEATURE:
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```
    287 <221> NAME/KEY: misc_feature
    288 <222> LOCATION: (1)..(26)
    289 <223> OTHER INFORMATION: NF2/3V1E 3' end, complement
    292 <400> SEQUENCE: 15
    293 ctgctcatgc cacccgagct cacagc                              26
    296 <210> SEQ ID NO: 16
    297 <211> LENGTH: 38
    298 <212> TYPE: DNA
C--> 299 <213> ORGANISM: Artificial
    301 <220> FEATURE:
    302 <223> OTHER INFORMATION: oligo 27
    304 <220> FEATURE:
    305 <221> NAME/KEY: misc_feature
    306 <222> LOCATION: (1)..(38)
    307 <223> OTHER INFORMATION: oligo 37
    310 <400> SEQUENCE: 16
    311 cgacaccgcg gccaccatga agctactgtc ttctatcg                 38
    314 <210> SEQ ID NO: 17
    315 <211> LENGTH: 28
    316 <212> TYPE: DNA
C--> 317 <213> ORGANISM: Artificial
    319 <220> FEATURE:
    320 <223> OTHER INFORMATION: oligo 38
    322 <220> FEATURE:
    323 <221> NAME/KEY: misc_feature
    324 <222> LOCATION: (1)..(28)
    325 <223> OTHER INFORMATION: oligo 38
    328 <400> SEQUENCE: 17
    329 cgacagtcga ccgatacagt caactgtc                            28
    332 <210> SEQ ID NO: 18
    333 <211> LENGTH: 34
    334 <212> TYPE: DNA
C--> 335 <213> ORGANISM: Artificial
    337 <220> FEATURE:
    338 <223> OTHER INFORMATION: oligo 39
    340 <220> FEATURE:
    341 <221> NAME/KEY: misc_feature
    342 <222> LOCATION: (1)..(34)
    343 <223> OTHER INFORMATION: oligo 39
    346 <400> SEQUENCE: 18
    347 cgacaccgcg gccaccatgg tttctaagct gagc                     34
    350 <210> SEQ ID NO: 19
    351 <211> LENGTH: 28
    352 <212> TYPE: DNA
C--> 353 <213> ORGANISM: Artificial
    355 <220> FEATURE:
    356 <223> OTHER INFORMATION: oligo 40
    358 <220> FEATURE:
    359 <221> NAME/KEY: misc_feature
```

```
RAW SEQUENCE LISTING ERROR SUMMARY     DATE: 06/05/2002
PATENT APPLICATION:  US/10/087,286     TIME: 10:51:45

    Input Set : A:\PTO.PG.txt
    Output Set: N:\CRF3\06052002\J087286.raw
```

Please Note:
Use of n and/or Xaa have been detected in the Sequence Listing. Please review the
Sequence Listing to ensure that a corresponding explanation is presented in the <220>
to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:24; N Pos. 13
Seq#:25; N Pos. 19

Invalid Line Length:
The rules require that a line not exceed 72 characters in length. This includes spaces.

Seq#:1; Line(s) 5

Invalid <213> Response:
Use of "Artificial" only as "<213> Organism" response is incomplete,
per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

Seq#:1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,27,28
Seq#:29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52
Seq#:53,54,55,56,57,58,59,60,61,62,63,64,65,66,67,68,69,70,71,72,73,74,75,76
Seq#:77,78,79